ENVIRONMENTAL ASSESSMENT

United States Department of the Interior
Bureau of Land Management
Bishop Field Office
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EA Number: DOI-BLM-CAC-070-2010-0012-EA

Lease/Serial/Case File No.:

Proposed Action Title/Type: Kirkwood Meadow Irrigation Ditch Maintenance

Location of Proposed Action: Kirkwood Meadow, Conway Summit Vicinity, Mono County, California; Bishop RMP Bridgeport Valley Management Area; T. 3 N., R. 25 E., portions of Sections 14, 22, 23, 26 MDM (Map 1).

Applicant (if any): BLM Wildlife Habitat Improvement Project

Plan Conformance:

This proposed action is subject to the Bishop Resource Management Plan (RMP), approved March 25, 1993 (USDI BLM 1993). The proposed action was developed and designed to implement RMP guidance and to ensure conformance with the General Polices, Area Manager's Guidelines, Valid Existing Management, Standard Operating Procedures, Decisions and Support Needs prescribed in the Bishop RMP. The proposed action has been reviewed and is in conformance with the plan. See Purpose and Need, below, for specific RMP guidance addressed by this project.

Purpose and Need for Proposed Action:

The purpose of the proposed action is to maintain and improve the existing irrigation ditch system for Kirkwood Meadow. Kirkwood Meadow is an irrigated wet meadow complex that provides important late-spring, summer, and fall habitat for a diverse suite of wildlife species including Greater Sage-Grouse (*Centrocercus urophasianus*), migratory mule deer (*Odocoileus hemionus*), and a wide-variety of other meadow dependent species. Kirkwood Meadow is also a key component of the Conway Summit Area of Critical Environmental Concern (ACEC) and a primary contributor to the scenic quality of the ACEC. The persistence of high quality wildlife habitat and scenic values associated with Kirkwood Meadow is dependent continued surface irrigation provided by the existing ditch system.

The Kirkwood Meadow Irrigation Ditch is currently in need of repair to restore it to a fully functional state. Siltation and disrepair of the existing ditch network and associated

diversion structures has compromised the water distribution and surface irrigation capabilities of the ditch. In its current state, the existing irrigation system provides inadequate water delivery to ensure the long-term persistence of the high quality wildlife habitat and scenic values associated with the irrigated wet meadow community at Kirkwood Meadow.

The proposed action was developed and designed to ensure conformance with the General Polices, Area Manager's Guidelines, Valid Existing Management, Standard Operating Procedures, Decisions and Support Needs prescribed in the Bishop RMP.

The proposed action would implement the following Bishop RMP Decisions (USDI BLM 1993):

- Protect and enhance unique or important vegetation communities and wildlife habitats (Area-Wide Decisions, p. 17).
- Meet DPC goals on 470 acres (75%) of aspen to increase wildlife habitat diversity and reduce erosion (Bridgeport Valley Management Area Decision, p. 27).
- Meet DPC goals on 85 acres (75%) of wet meadows to increase wildlife habitat diversity and reduce erosion (Bridgeport Valley Management Area Decision, p. 27).
- Yearlong Protection of the [Conway Summit] ACEC. Target resources area scenery, riparian habitat and recreation opportunities (Bridgeport Valley Management Area Decision, p. 29).
- Manage all activities [in the Conway Summit ACEC] to conform to VRM I standards (Bridgeport Valley Management Area Decision, p. 29).

Additional RMP direction that supports implementation of the proposed action includes:

- Vegetation will be a key element in the plan and management will be directed toward the achievement of desired plant community goals (Area Manager's Guideline, p. 9).
- Maintenance of structural improvements shall be provided by the user deriving the primary benefit from the improvement (Standard Operating Procedures, p. 12).

Description of the Proposed Action:

Project Overview

The proposed action would involve the excavation and removal of accumulated sediment and debris from the Kirkwood Meadow Irrigation Ditch using a small backhoe. Excavated sediment and debris would be temporarily stockpiled on-site, then hauled from the project area and disposed in a landfill. Existing diversion structures would be removed to facilitate sediment removal, then rebuilt and re-installed to restore proper function of the irrigation system. Up to 5 additional diversion structures would be installed to further improve the water distribution and surface irrigation capabilities of the existing ditch. Project work would occur in the fall, after the summer irrigation season

has been completed and soils in the project area have been allowed to dry out. Maintenance activities would be performed on approximately one non-contiguous mile of the existing ditch network and occur over an estimated 2 week period.

Project Area Description

The Kirkwood Meadow Irrigation Ditch includes approximately 2 miles of developed ditches located on public lands administered by the Bureau of Land Management (BLM) Bishop Field Office in the vicinity of Conway Summit in Mono County, California. The project area is located west of U.S. Highway 395 and north of the Virginia Lakes Road about 12 miles south of Bridgeport (Map 1).

Vegetation in the project area is characterized by species associated with mesic graminoid and dry graminoid meadow complexes. Scattered aspen groves and sage-steppe characterize the surrounding landscape. Elevation is around 8,000 feet above sea level. Average slope is < 8%. The project area is surrounded by undeveloped public lands and adjacent undeveloped private land (Map 1).

The project area is reached by dirt roads that are accessible by truck during the normal operating season (May - November). Four-wheel drive is recommended.

Project Implementation Specifications

The proposed action would include to the following design features to avoid inadvertent impacts to other resources within the project area:

- Primary access to the project site would be limited to existing roads. Off-road equipment travel and use would be restricted to the immediate ditch edge and the footprint of the existing ditch network. Disturbed areas and equipment tracks would be re-contoured by hand following the completion of ditch maintenance work.
- All project vehicles and equipment would be equipped with spark arrestors and mufflers.
- No toxic materials or fluids would be used or disposed at the site.
- All soil moving equipment would be pre-washed with a high powered water spray device to remove any weed seed prior to site access. All sediment removed from the ditch and not used for ditch maintenance work would be removed from the site.
- To protect breeding and nesting birds, including Greater Sage-Grouse, no project work would occur between March 1st and August 15th.
- If previously undiscovered archaeological resources are encountered during project implementation, operations would be immediately stopped and the Bishop Field Office manager and archaeologist notified. The project would be modified to avoid impacts to any late discoveries of archaeological resources prior to the resumption of work.

No Action Alternative:

Under the no action alternative, no maintenance or improvement work would be performed on the Kirkwood Meadow Irrigation Ditch. No sediment or debris would be removed from the existing ditch network and no diversion structures would be repaired, replaced or installed. The system would continue to function at reduced capacity and efficient use of the BLM's irrigation water allocation would not be achieved. The health and productivity of the irrigated wet meadow community and associated aspen complexes would likely decline over the long-term. The persistence of the high quality wildlife habitat and scenic values associated with the irrigated wet meadow community at Kirkwood Meadow would be compromised.

Environmental Analysis:

AIR QUALITY

Affected Environment

The proposed project site is not within any federal non-attainment/maintenance area under jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). Federal actions are not subject to conformity determinations under 40 CFR 93.

Environmental Consequences

Impacts of the Proposed Action

Support vehicles would raise dust while accessing the project site via dirt roads. Vehicles and equipment used for ditch maintenance would emit various precursor emissions for ozone. Emission amounts from the proposed action would be negligible. The proposed action would not result in the emission of PM10. The proposed action would not measurably affect air quality.

Impacts of No Action

No fugitive dust or precursor emissions for ozone would be emitted as the result of the proposed project. The no action alternative would have no impact on air quality.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

Affected Environment

The proposed project site is located within the Conway Summit ACEC (ACEC). The goals of the ACEC are to protect scenic values and to enhance dispersed recreation opportunities (Bishop RMP, p. 29). Kirkwood Meadow is a primary contributor to the scenic character of the ACEC and is dependent upon continued irrigation to maintain its scenic quality.

Impacts of the Proposed Action

The proposed action would enhance the scenic, riparian and recreational values of the ACEC by improving the quality of the meadow habitat. The RMP directs yearlong protection of these values in the ACEC and the ability for water to reach the fringes of the meadow is a key component of its protection. The brief presence of machinery completing the work would be a minor and temporary distraction to the area. Implementation of the proposed action would help fulfill the direction given by the RMP.

Impacts of No Action

Under the no action alternative, the quality and size of the meadow would decrease. This would degrade the scenic, riparian and recreational values of the ACEC and possibly reduce the opportunities for dispersed recreation.

CULTURAL RESOURCES

Affected Environment

A cultural resources inventory report short form was generated for the project area. A record search was conducted by the Bishop Field Office archaeologist on 12/8/2009. A field exam was conducted the following day on approximately 1 kilometer of the ditch.

There are no cultural sites present within the Area of Potential Effect (APE). The ditch system itself is an unevaluated historic feature that has been used continuously for irrigation purposes into contemporary times.

Environmental Consequences

Impacts of the Proposed Action

As no cultural sites were identified within the APE, the proposed project would have no effect on cultural resources. There would also be no effect on any historic value of the ditch since the ditch has been continuously maintained and used for irrigation purposes into contemporary times.

Impacts of No Action

The no action alternative would have no impact on cultural resources.

ENVIRONMENTAL JUSTICE

The proposed action and no action alternatives would have no disproportionate impact, either negative or positive, on any low-income minority because the proposed project would occur on vacant public land and there are no low-income or minority populations living in the vicinity of, or dependent upon, the proposed project area.

ESSENTIAL FISH HABITAT

The proposed action and no action alternatives would have no effect on essential fish habitat because the proposed project site is not located within or adjacent to any designated essential fish habitats.

FARMLANDS, PRIME OR UNIQUE

The proposed action and no action alternatives would have no effect on any farmlands, prime or unique, because the proposed project site is not located within or adjacent to any farmlands, prime or unique.

FLOOD PLAINS

The proposed action and no action alternatives would have no effect on flood plains because the proposed project site is not located within or adjacent to any flood plains.

GLOBAL CLIMATE CHANGE

Affected Environment

United States Department of Interior, Order Number 3226, signed January 19, 2001, Evaluating Climate Change Impacts in Management Planning, is an order to ensure that climate change impacts are taken into account in connection with planning and decision making. Climate change refers to any significant change in measures of climate (e.g. temperature or precipitation) lasting for an extended period of time (decades or longer). Climate change may result from natural processes, such as changes in the sun's intensity; natural processes within the climate system (e.g. changes in ocean circulation); human activities that change the atmosphere's composition (e.g. burning fossil fuels) and the land surface (e.g. urbanization) (IPCC 2007).

There is broad scientific consensus that humans are changing the chemical composition of our atmosphere" (Jones & Stokes August 2007). Changes in the atmosphere have likely influenced temperature, precipitation, storms and sea level (IPCC 2007). Rising greenhouse gas (GHG) levels are likely contributing to global climate change.

Impacts of the Proposed Action

The proposed action would result in minor contributions of greenhouse gas (GHG) emissions associated with the operation of vehicles and equipment required for project implementation. These contributions would not have a noticeable or measurable effect, independently or cumulatively, on a phenomenon occurring at the global scale and believed to be due to more than a century of human activities.

Impacts of No Action

The no action alternative would not contribute to GHG emissions and would have no impact on climate change at either the local or global scale.

INVASIVE, NON-NATIVE SPECIES

Affected Environment

Cheat grass stands consisting of 10-15% cover occur in upland areas adjacent to the proposed project site and are most frequently associated with historic sheep bedding areas. Russian thistle (*Salsola tragus*), *Descurania Sophia* and non-native goosefoot (*Chenopodium* spp.) e.g. *Chenopodium album* comprise 5% or less cover within the transition zone between upland and dry meadow sites. No California A-rated invasive, non-native species are known to occur within the project area.

Environmental Consequences

Impacts of the Proposed Action

The proposed action is not anticipated to increase the current extent of invasive species due to project implementation specifications designed specifically to limit weed seed transport and spread via equipment. In addition, improved surface irrigation would stimulate wet meadow production and reduce the risk of weed invasion.

Impacts of No Action

The no action alternative would reduce surface irrigation capabilities within the project area over the long-term, which would increase the rate and extent of meadow conversion to more ruderal sites that would be at higher risk for weed invasion.

NATIVE AMERICAN CULTURAL VALUES

Affected Environment

There are 11 Native American communities within, or in close proximity to, the eastern Sierra region administered by the Bishop Field Office. None of these communities are living on, or adjacent to, the proposed project area. No treaty rights (hunting, fishing, etc.) are associated with any of these communities or with the proposed project site.

Some members of these communities hunt and some do subsistence collecting of materials such as basket weaving materials and medicinal plants on public lands. However, this is general use and no specific “traditional use areas” have been identified by any of the tribes at this time. Any other traditional uses or use areas have not been divulged to this office.

Environmental Consequences

Impacts of the Proposed Action

The proposed action is not expected to have any negative impacts on Native American cultural values or concerns described above because there would be no measureable effect on the natural environment upon which Native American cultural values depend.

Impacts of No Action

The no action alternative would have no effect on any Native American cultural values or concerns described above.

RANGELANDS-LIVESTOCK MANAGEMENT

The proposed action and no action alternatives would have no effect on rangelands or livestock management because the proposed project site, referred to as the “Conway Summit acquired lands” in the Bishop RMP, is closed to livestock grazing (Bishop RMP, p. 29).

RECREATION

Affected Environment

Recreation use associated with the proposed project site and surrounding vicinity is characterized by light, infrequent dispersed use including exploration of semi-primitive backcountry roads and trails, camping, hiking, hunting and wildlife viewing. The proposed project site is not located within or adjacent to any developed recreational facilities. No intensive recreation use or activity occurs at or near the proposed project site.

Environmental Consequences

Impacts of the Proposed Action

There would be no impact on developed recreational opportunities because the proposed project site is not located within or adjacent to any developed recreational facilities and no intensive recreation use or activity occurs at or near the proposed project site. Dispersed recreation opportunities would be maintained and enhanced by ensuring the maintenance of scenic, riparian and wildlife values associated with improved irrigation capabilities at Kirkwood Meadow.

Impacts of No Action

The no action alternative would have no effect on developed recreation opportunities. Dispersed recreation opportunities would be negatively affected over the long-term if meadow quality and associated wildlife use was allowed to degrade as the result of compromised irrigation capabilities at Kirkwood Meadow.

SOCIAL AND ECONOMIC VALUES

Affected Environment

Mono County's economy, including the town of Bridgeport, is largely dependent on natural resource based tourism. No social or economic values are known to be directly associated with the proposed project site.

Environmental Consequences

Impacts of the Proposed Action

The proposed action would potentially have a positive effect on social and economic values by enhancing hunting and wildlife viewing opportunities, consequently increasing tourism to the general area.

Impacts of No Action

The no action alternative would have no effect on social and economic values.

SOILS

Affected Environment

Soils within the project area are comprised of rock and alluvium derived from granitic parent material. The most common soil taxa within the mesic graminoid meadow are Typic Cryaquolls with a peat or muck rich surface layer. This soil type is most common in drainage ways, but can also be found on floodplains. Within the dry graminoid sites Haplocryolls indicated by dark, mollic surface horizons are dominant. These soils lack saturation.

Environmental Consequences

Impacts of the Proposed Action

The proposed action would involve low intensity soil disturbance, limited to the localized and temporary effects of backhoe movements along the ditch edge. Meadow soils would not be displaced and sediment piles would be removed from the project site. Timing of the action would occur when soils are not saturated which would reduce the

potential for surface erosion and compaction.

Impacts of No Action

The no action alternative would have no impact on existing soil conditions.

VEGETATION, including THREATENED, ENDANGERED and SPECIAL STATUS PLANTS

Affected Environment

Lower Montane Meadows

The two dominant ecological meadow types within the project area are mesic graminoid and dry graminoid (Weixelman and Zamudio 1999). Mesic graminoid meadows are wet to moist well into the growing season. Depth to saturation averages 34 cm. Dominant species in the mesic graminoid meadow include but are not limited to: Nebraska sedge (*Carex Nebrascensis*), *Carex simulata*, *Carex lanuginosa*, *Carex utriculata*, *Deschampsia cespitosa*, *Hordeum brachyantherum*, *Muhlenbergia filiformis*, *Epilobium ciliatum*, *Stellaria longipes var longipes* and *Aster occidentalis*. Willow stands border these communities and include such species as *Salix geyeriana*, *Salix lemmonii*, *Salix lutea* and *Salix exigua*.

Dry graminoid meadows occur on the edges of the mesic graminoid meadows in the transition between upland sites. Dominant species in the dry graminoid meadow include but are not limited to: *Poa secunda ssp. juncifolia*, *Muhlenbergia richardsonis*, *Carex praegracilis*, thin-stemmed wheatgrass (*Elymus trachycaulus*), *Carex filifolia*, Baltic rush (*Juncus balticus*), *Penstemon rydbergii*, *Gayophytum diffusum*, *Trifolium monanthum* and yarrow (*Achillea millefolium*).

Aspen Grove Communities

Aspen groves are an important plant community type within the Bridgeport Valley Management Area. They range in size from small, scattered stands to large > 5 acre complexes. Aspen grove community structure is influenced by site hydrology, elevation, and exposure and has several physiological characteristics that permit it to attain great geographic amplitude as well as varied structural and compositional potential (Lieffers et. al 2001). In 1980, 1995, 1996 and 1998 aspen grove complexes throughout the Bodie Hills and Bridgeport Valley management areas were assessed to describe and assess the structural components important for wildlife habitat. Age-class distributions within sampled complexes are generally even-aged with moderate to low juveniles (sucker recruitment) and/or sucker recruitment occurring on the fringes of the grove. Understory vegetation is more diverse in groves associated with springs but the majority of groves are dominated by California brome (*Bromus carinatus*), *Hordeum jubatum*, hawksbeard (*Crepis spp.*), *Descurania sophia*, *Osmorhiza occidentalis*, currant (*Ribes aureum* and *R. velutinum*) and occasional snowberry (*Symphoricarpos rotundifolius*).

Uplands

Montane sagebrush and low sagebrush communities comprise the dominant plant communities on the periphery of the project area. Montane sagebrush sites are dominated by an over-story of mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana)* and bitterbrush (*Purshia tridentata* var. *tridentata)*. Understory grasses include Indian rice grass (*Achnatherum hymenoides*), western needlegrass (*Achnatherum occidentalis*), Thurber's needlegrass (*Achnatherum thurberianum*) and cheat grass (*Bromus tectorum*). Additional upland species include, but are not limited to, currant and gooseberry species (*Ribes spp.)*, curly-leaved rabbitbrush (*Chrysothamnus viscidiflorus) and* desert peach *(Prunus andersonii).*

Low Sagebrush sites consist of *Artemisia arbuscula* as the dominant over-story species with a native perennial grass and forb understory consisting of the following species; squirrel tail (*Elymus elymoides*), June grass *(Koleria micrantha*), Weber's needlegrass (*Achnatherum webberi),* cheat grass (*Bromus tectorum*), dwarf goldenbush (*Ericameria suffruticosa*), Mono clover (*Trifolium andersonii*), short-stem stenotus (*Stenotus acaulis*) and cushion buckwheat (*Eriogonum caespitosum*).

Environmental Consequences

Impacts of the Proposed Action

The proposed action would not adversely affect the composition or structure of the wet meadow vegetation within the project area. Benefits to wet meadow vegetation would include greater plant production due to increased surface irrigation and weed reduction due to increased meadow species vigor and reduction of ruderal sites that would be available for weed establishment. Silt piles would be removed post ditch cleaning so piles would not impact the growth of existing vegetation.

Impacts of No Action

The no action alternative would reduce surface irrigation needed to maintain the production and extent of existing meadow vegetation. Currently, water flow is restricted due to lack of adequate ditch maintenance and large portions of the meadow are losing cover and compositional elements necessary for community level function.

Threatened and Endangered Plant Species

No threatened or endangered plant species are known or likely to occur within or adjacent to the proposed project site based on historical records, field monitoring, and habitat suitability. The proposed action and no action alternatives would have no effect on any federally-listed threatened or endangered plant species, nor would it result in the destruction or adverse modification of any designated critical habitat, because none are present within or adjacent to the proposed project site.

Special Status Plant Species

No Special Status Plant Species are known or likely to occur within or adjacent to the proposed project site based on historical records, field monitoring, habitat suitability, and BLM and CNDDB database records (2010). The proposed action and no action alternatives would have no effect on BLM Special Status Plants, due to the lack of presence of these species.

VISUAL RESOURCES

Affected Environment

The Kirkwood Meadow Irrigation Ditch project site is located within a VRM Class I area. The objective of VRM Class I as defined in the Bishop RMP is "to preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention. This class provides for natural ecological changes; however, it does not preclude very limited management."

The basic elements of form, line, color and texture of the proposed project areas and surrounding vicinity are characterized by an irrigated wet meadow community as well as open sagebrush steppe habitat typical of the western Great Basin. The project area is at both the interface of sagebrush steppe and the meadow and within the meadow itself. The irrigated meadow is a primary contributor to the scenic quality of the area.

Environmental Consequences

Impacts of the Proposed Action

The visual impact of the proposed project would be very slight. Removing sediment and improving diversion structures would not create any detectable change in the visual quality of the area. Only the temporary presence of equipment during project implementation would be noticeable. This impact would be very short-term. Kirkwood Meadow is a key contributor to the overall visual quality of the area and improved irrigation capabilities would help maintain and improve the visual quality of the area over the long-term.

Impacts of No Action

The no action alternative would degrade the scenic quality of the area over the long-term by allowing portions of the meadow to deteriorate. The extent of the visible green meadow would decrease, thus negatively impacting the effect the meadow has on the areas overall visual quality.

WASTE, HAZARDOUS OR SOLID

Affected Environment

The proposed project area is not within or adjacent to any existing hazardous materials site.

Environmental Consequences

Impacts of the Proposed Action

The proposed action does not involve the use or storage of hazardous materials, other than fuel and oil used in project vehicles and equipment. No hazardous materials would be brought on site or produced during project operations. The proposed action would not generate any hazardous or solid waste within the proposed project site.

Impacts of No Action

The no action alternative would have no impact to hazardous materials.

WATER QUALITY

The proposed action and no action alternatives would have no effect on drinking water quality. The Kirkwood Meadow Irrigation Ditch is a terminal ditch diverted off of Virginia Creek. Diverted surface water is not returned to Virginia Creek, but is dissipated on the irrigated meadow. Water would not be flowing in the irrigation ditch during project implementation and no impacts to surface water quality are expected.

WETLANDS/RIPARIAN ZONES

(See Vegetation section above)

WILD AND SCENIC RIVERS

The proposed action and no action alternatives would have no effect on wild and scenic rivers because the proposed project site is not located within or adjacent to any designated wild and scenic river corridor or eligible wild and scenic river study segment corridor.

WILDERNESS

The proposed action and no action alternatives would have no effect on wilderness because the proposed project site is not located within any designated wilderness area or designated wilderness study area.

WILDLIFE, including THREATENED, ENDANGERED and SENSITIVE SPECIES

Affected Environment

Meadow habitats provide cover and foraging opportunities to wildlife including Greater Sage-Grouse, mule deer, migratory songbirds, small mammals, and a variety of other species. Meadows are uncommon in the project vicinity and Kirkwood Meadow provides an important resource for wildlife in the area.

Greater Sage-Grouse are a BLM designated sensitive wildlife species and a candidate for listing under the Endangered Species Act of 1973 (ESA). Sage-grouse in the project vicinity occur within the western-most portion of the Bodie Population Management Unit (PMU) as defined in the *Greater Sage-Grouse Conservation Plan for Nevada and Eastern California* (NDOW 2004) and are part of the recently designated Bi-state distinct population segment (USDI FWS 2010).

The proposed project site is located within 2 miles (3.2 km) of 3 Greater Sage-Grouse leks, or strutting grounds, where mating takes place during the spring breeding season. After mating, sage grouse hens typically establish nests in suitable sagebrush or sagebrush/bitterbrush habitat in the vicinity of leks. Kirkwood Meadow is not suitable for nesting, but does provide important cover and foraging habitat for grouse and their young during the late spring and summer.

The project area also provides essential foraging habitat for mule deer from the Mono Lake and East Walker deer herds during the summer season.

Environmental Consequences

Impacts of the Proposed Action

The proposed project would have no measurable detrimental effects on the current or long-term availability of habitat for any animal species known or likely to occur in vicinity of the proposed project site. The proposed action is designed to maintain and improve irrigated wet meadow habitat at Kirkwood Meadow and would benefit and associated wildlife species over the long-term.

Because work would not occur between March 1 and August 15, sage-grouse and nesting songbirds would not be adversely affected by project activities. There may be some short-term disturbance and displacement of wildlife, such as mule deer and songbirds, from the immediate project vicinity as the result of noise and activity associated with project implementation. Displacement and disturbance impacts would be short-term and no measureable detrimental effects are expected.

The proposed project would ensure the long-term productivity and availability of key late brood/summer meadow habitat at Kirkwood Meadow for Greater Sage-Grouse in the western-most portion of the Bodie PMU.

The proposed project would also improve summer cover and forage conditions for mule deer and other meadow dependent species in the project area.

Impacts of No Action

As compared to the proposed action, the no action alternative would not maintain or improve important foraging habitat for sage-grouse, mule deer and other wildlife species.

Threatened or Endangered Wildlife Species

No threatened or endangered wildlife species are known or likely to occur within or adjacent to the proposed project site, based on historical records, field monitoring, and habitat suitability. The proposed action and no action alternatives would have no effect on any federally-listed threatened or endangered wildlife species, nor would it result in the destruction or adverse modification of any designated critical habitat, because none are present within or adjacent to the proposed project site.

Cumulative Effects:

Cumulative effects are defined as the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR § 1508.7). A description of current conditions inherently includes the effects of past actions and serves as a more accurate and useful starting point for a cumulative effects analysis than attempting to discern the effects of individual past actions. "Generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." (CEQ Memorandum 'Guidance on the Consideration of Past Actions in Cumulative Effects Analysis' June 24, 2005). By comparing the no action alternative (current condition) to the proposed action alternative, we can discern the cumulative impact resulting from adding the incremental impact of the proposed action to the current environmental conditions and trends.

There are no identified incremental or long-term negative impacts associated with implementation of the proposed action that would contribute to cumulative impacts in the larger project vicinity. The addition of the proposed action to existing and future regional activities and impacts would not add to, or cross a threshold of, impact that would result in a significant impact on the human environment.

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Date: September 1, 2010

Reviewed By:

/s/ Steve Nelson **Date:** 9/2/2010
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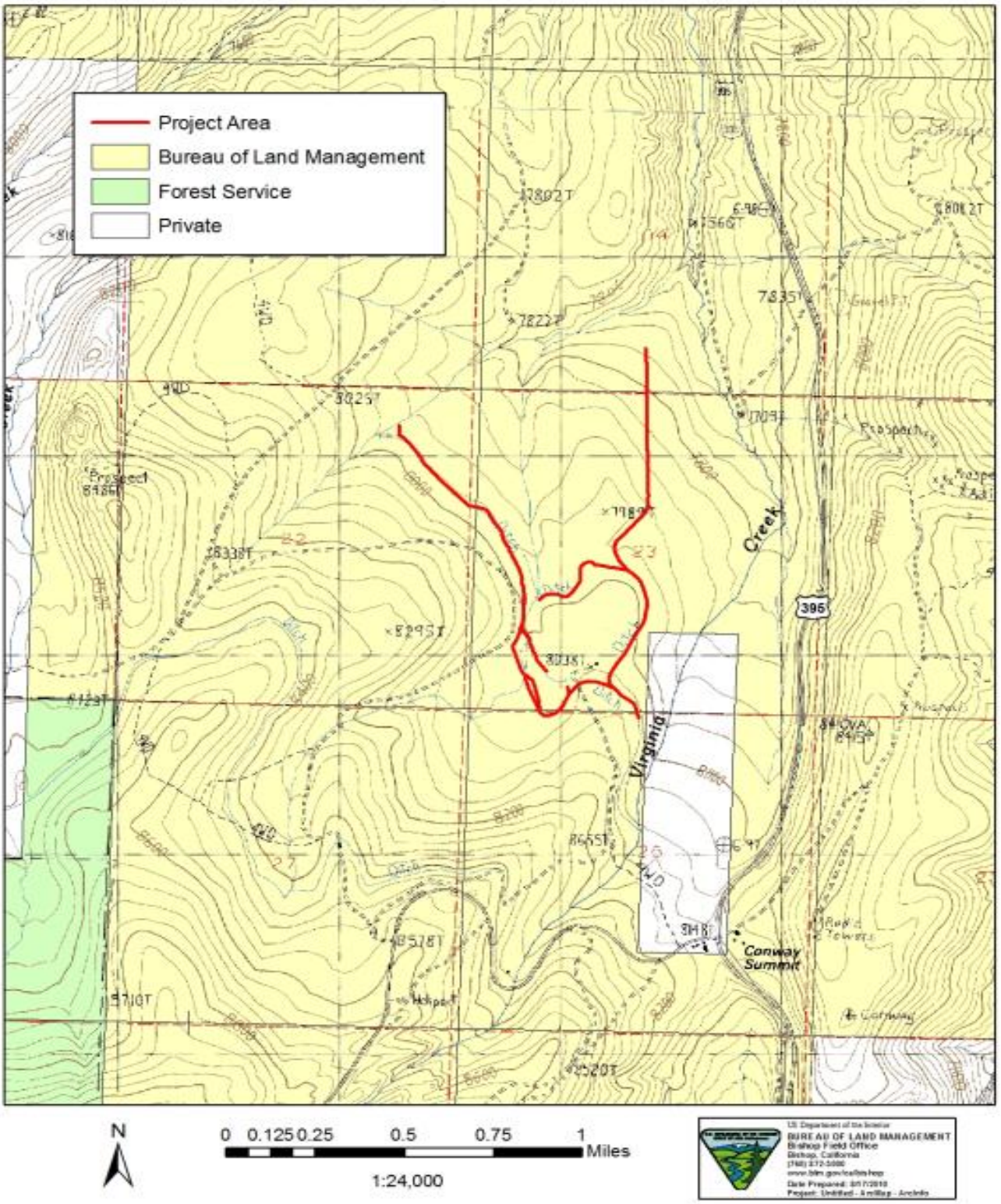

Map 1. Overview of the Kirkwood Meadow Irrigation Ditch Maintenance Project.

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